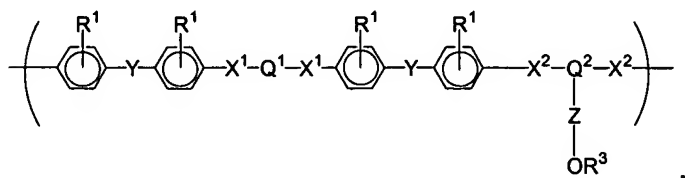


Amendments to the Claims:

Claim 40 has been amended herein to add the claim identifier. The claims and their status are listed below.

1. (Withdrawn) A polymer, comprising units having the formula



wherein:

Q¹ comprises at least one aryl or heteroaryl group;

Q² comprises at least one aryl or heteroaryl group;

X¹ is O bonded directly to an aryl carbon of Q¹;

X² is O bonded directly to an aryl carbon of Q²;

Z is a linker comprising at least one $-(C(R^2)_2)-$ group;

Y is a single bond or a linker group;

R¹ is independently at each occurrence H, a halogen, an alkyl group, a heteroalkyl group, an aryl group, or a heteroaryl group;

R² is independently at each occurrence H, an alkyl group, or a heteroalkyl group;

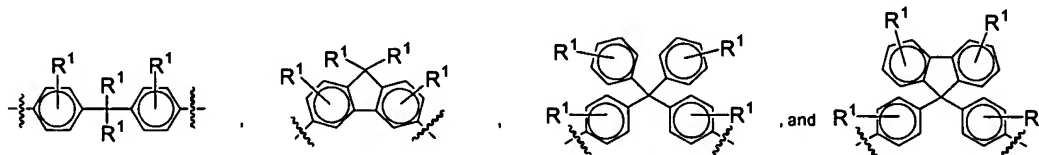
and

R³ is H or a crosslinkable group.

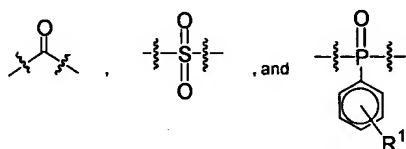
2. (Withdrawn) The polymer of Claim 1, wherein Q¹ comprises at least two aryl or heteroaryl groups.

3. (Withdrawn) The polymer of Claim 2, wherein Q¹ comprises a methylenediphenyl group in which the methylene carbon is bonded to at least 2 phenyl groups.

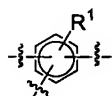
4. (Withdrawn) The polymer of Claim 3, wherein Q¹ is selected from the group consisting of



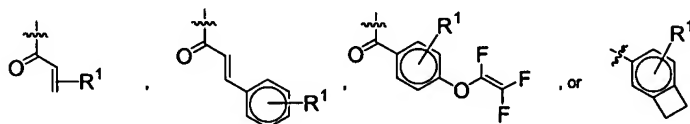
5. (Withdrawn) The polymer of Claim 1, wherein Q^1 comprises a polycyclic aromatic ring system or a polycyclic heteroaromatic ring system.
6. (Withdrawn) The polymer of Claim 1, wherein Y is a single bond, an alkene or an alkyne group.
7. (Withdrawn) The polymer of Claim 1, wherein Y is a ketone, a sulfone, or a phosphine oxide group.
8. (Withdrawn) The polymer of Claim 7, wherein Y is selected from the group consisting of



9. (Withdrawn) The polymer of Claim 1, wherein Q^2 comprises a 6-membered aromatic or heteroaromatic ring, a polycyclic aromatic ring system, or a polycyclic heteroaromatic ring system.
10. (Withdrawn) The polymer of Claim 9, wherein Q^2 comprises



11. (Withdrawn) The polymer of Claim 2, wherein Z is $-(\text{CH}_2)_n-$ or $-(\text{CH}_2\text{CH}_2\text{O})_n-$, wherein $n = 1$ to 10.
12. (Withdrawn) The polymer of Claim 1, wherein R^3 is selected from the group consisting of



13. (Withdrawn) The polymer of Claim 1, wherein:

Q^1 comprises a methylenediphenyl group in which the methylene carbon is bonded to at least 2 phenyl groups;

Q^2 comprises a phenyl ring;

Y is a single bond; and

Z is $-\text{CH}_2-$

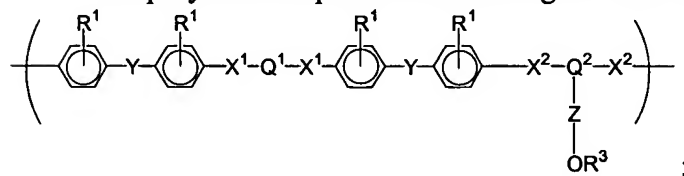
14. (Withdrawn) The polymer of Claim 13, wherein R^1 is fluorine.

15. (Withdrawn) The polymer of Claim 13, wherein R^3 comprises an aryl trifluorovinyl ether.

16. (Withdrawn) The polymer of Claim 13, wherein the methylene carbon of Q^1 is bonded to at least three phenyl rings.

17. (Original) A composition made by a process comprising a) providing a precursor composition comprising a polymer and b) crosslinking the polymer, wherein:

the polymer comprises units having the formula



wherein:

Q^1 comprises at least one aryl or heteroaryl group;

Q^2 comprises at least one aryl or heteroaryl group;

X^1 is O bonded directly to an aryl carbon of Q^1 ;

X^2 is O bonded directly to an aryl carbon of Q^2 ;

Z is a linker comprising at least one $-(\text{C}(\text{R}^2)_2)-$ group;

Y is a single bond or a linker group;

R^1 is independently at each occurrence H, a halogen, an alkyl group, a heteroalkyl group, an aryl group, or a heteroaryl group;

R^2 is independently at each occurrence H, an alkyl group, or a heteroalkyl group;

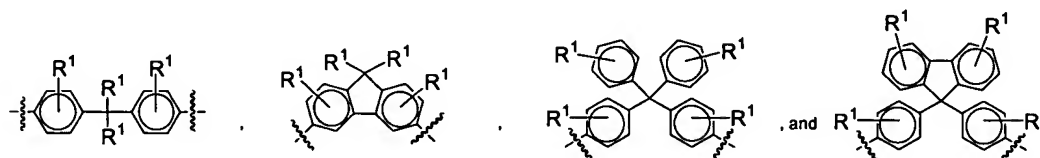
and

R^3 is H or a crosslinkable group.

18. (Original) The composition of Claim 17, wherein Q^1 comprises at least two aryl or heteroaryl groups.

19. (Original) The composition of Claim 18, wherein Q^1 comprises a methylenediphenyl group in which the methylene carbon is bonded to at least two phenyl groups.

20. (Original) The composition of Claim 19, wherein Q^1 is selected from the group consisting of

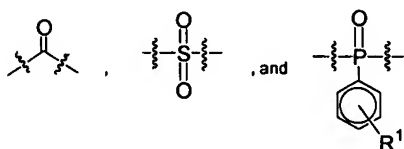


21. (Original) The composition of Claim 17, wherein Q^1 comprises a polycyclic aromatic ring system or a polycyclic heteroaromatic ring system.

22. (Original) The composition of Claim 17, wherein Y is a single bond, an alkene or an alkyne group.

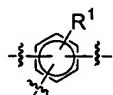
23. (Original) The composition of Claim 17, wherein Y is a ketone, a sulfone, or a phosphine oxide group.

24. (Original) The composition of Claim 23, wherein Y is selected from the group consisting of



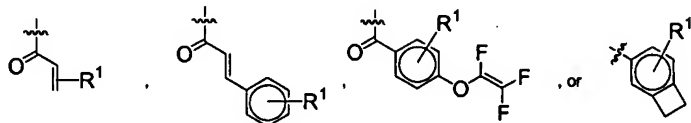
25. (Original) The composition of Claim 17, wherein Q^2 comprises a 6-membered aromatic or heteroaromatic ring, a polycyclic aromatic ring system, or a polycyclic heteroaromatic ring system.

26. (Original) The composition of Claim 25, wherein Q^2 comprises



27. (Original) The composition of Claim 17, wherein Z is $-(CH_2)_n-$ or $-(CH_2CH_2O)_n-$, wherein $n = 1$ to 10.

28. (Original) The composition of Claim 17, wherein R^3 is selected from the group consisting of



29. (Original) The composition of Claim 17, wherein:

Q^1 comprises a methylenediphenyl group in which the methylene carbon is bonded to at least two phenyl groups;

Q^2 comprises a phenyl ring;

Y is a single bond; and

Z is $-\text{CH}_2-$

30. (Original) The composition of Claim 29, wherein R^1 is fluorine.
31. (Original) The composition of Claim 29, wherein R^3 comprises an aryl trifluorovinyl ether.
32. (Original) The composition of Claim 31, wherein crosslinking the polymer comprises heating to at least about 200 °C.
33. (Original) The composition of Claim 29, wherein the methylene carbon of Q^1 is bonded to at least three phenyl rings.
34. (Original) The composition of Claim 17, wherein the precursor composition further comprises an additive selected from the group consisting of diepoxides, diisocyanates, diisothiocyanates, and combinations thereof.
35. (Original) The composition of Claim 17, wherein crosslinking is effect by heating above 200°C.
36. (Original) The composition of Claim 17, wherein crosslinking is effected by actinic radiation.

37. (Original) A device including an optical waveguide comprising the composition of Claim 17.
38. (Original) The device of Claim 37, wherein the optical waveguide comprises a core that includes the composition of Claim 17.
39. (Original) The device of Claim 37, wherein the optical waveguide comprises a clad that includes the composition of Claim 17.
40. (Original) The device of Claim 37, wherein the optical waveguide comprises a core and a clad, both of which comprise the composition of Claim 17.